WE CLAIM:

1. A method for purifying a thermoplastic norbornene resin comprising:

cleaning said norbornene resin to eliminate organic impurities, ionic impurities, metallic impurities, and particles by using cleaning liquid selected from 2-propanol and a mixed solvent of 2-propanol and water to form a purified resin.

2. The method for purifying a thermoplastic norbornene resin according to claim 1, wherein said mixed solvent has a mixing ratio of 2-propanol to water of from 1:1 to 5:1 by volume.

3. The method for purifying a thermoplastic norbornene resin according to claim 1, wherein said purified resin contains said organic impurities not more than 30 ppb, said ionic impurities not more than 5 ppb, and said metallic impurities not more than 5 ppb.

4. The method for purifying a thermoplastic norbornene resin according to claim 2, wherein said purified resin contains said organic impurities not more than 30 ppb, said ionic impurities not more than 5 ppb, and said metallic impurities not more than 5 ppb.

5. The method for purifying a thermoplastic norbornene resin according to claim 3, wherein said organic impurities comprise hydrocarbon impurities of

not more than 20 ppb, deterioration product of antioxidant of not more than 5 ppb, and deterioration product of oxidized resin component of not more than 5 ppb.

6. The method for purifying a thermoplastic norbornene resin according to claim 4, wherein said organic impurities comprise hydrocarbon impurities of not more than 20 ppb, deterioration product of antioxidant of not more than 5 ppb, and deterioration product of oxidized resin component of not more than 5 ppb.

7. A plastic substrate for a magnetic recording medium manufactured by injection-molding a thermoplastic norbornene resin purified by the method defined by claim 1.

8. A plastic substrate for a magnetic recording medium manufactured by injection-molding a thermoplastic norbornene resin purified by the method defined by claim 2.

9. A plastic substrate for a magnetic recording medium manufactured by injection-molding a thermoplastic norbornene resin purified by the method defined by claim 3.

10. A plastic substrate for a magnetic recording medium manufactured by injection-molding a thermoplastic norbornene resin purified by the method defined by claim 4.

11. A plastic substrate for a magnetic recording medium manufactured by injection-molding a thermoplastic norbornene resin purified by the method defined by claim 5.

12. A plastic substrate for a magnetic recording medium manufactured by injection-molding a thermoplastic norbornene resin purified by the method defined by claim 6.

13. The plastic substrate for a magnetic recording medium according to claim 7, wherein number of defect that is not smaller than 1 μm in diameter existing on a surface of said plastic substrate is not more than 100 per surface.

14. A magnetic recording medium comprising:

said plastic substrate defined by claim 7; and

a magnetic layer, a protective layer, and a liquid lubricant layer sequentially formed on said plastic substrate.

15. A magnetic recording medium comprising:

said plastic substrate defined by claim 8; and

a magnetic layer, a protective layer, and a liquid lubricant layer sequentially formed on said plastic substrate.

16. A magnetic recording medium comprising:

said plastic substrate defined by claim 9; and

a magnetic layer, a protective layer, and a liquid lubricant layer sequentially formed on said plastic substrate.

17. A magnetic recording medium comprising:

said plastic substrate defined by claim 10; and

a magnetic layer, a protective layer, and a liquid lubricant layer sequentially formed on said plastic substrate.

18. A magnetic recording medium comprising:

said plastic substrate defined by claim 11; and

a magnetic layer, a protective layer, and a liquid lubricant layer sequentially formed on said plastic substrate.

19. A magnetic recording medium comprising:

said plastic substrate defined by claim 12; and

a magnetic layer, a protective layer, and a liquid lubricant layer sequentially formed on said plastic substrate.

20. The magnetic recording medium according to claim 14, wherein said medium does not generate any blister having a diameter of not less than 1 μm and a height of not less than 0.1 μm when said medium is left in an environment of selected from 60°C at 80% RH, -40°C at 10% RH, and a combination of these conditions.

21. A method for manufacturing a magnetic recording medium comprising:

purifying a thermoplastic norbornene resin using a cleaning liquid that is selected from 2-propanol and a mixed solvent of 2-propanol and water;

forming a plastic substrate by injection-molding said purified resin; and

sequentially depositing a magnetic layer, a protective layer, and a liquid lubricant layer on said plastic substrate.

22. The method for manufacturing a magnetic recording medium according to claim 21, wherein said mixed solvent of 2-propanol and water is a mixture with mixing ratio 2-propanol : water is from 1:1 to 5:1.